

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Girish Kumar Muralidharan et al.	§		
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March 11, 2008

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/John Rariden/

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REPLY BRIEF PURSUANT TO 37 C.F.R. §§41.41

Appellants submit this Reply Brief pursuant to 37 C.F.R. §§41.41, and in response to the Examiner's Answer mailed on January 11, 2008. Appellants, however, respectfully request that the Board consider Appellants' complete arguments set forth in the previously filed Appeal Brief, in addition to the following remarks.

Appellants have carefully reviewed the Examiner's arguments and the response to the arguments advanced in the Examiner's Answer. Appellants maintain that claims 10-17 and 36 are allowable under 35 U.S.C. §101, as each of these claim is directed towards statutory subject matter. Further, Appellants maintain that contrary to the Examiner's assertions, no combination of the Miller, Goertzel, and Lounsberry references is sufficient to render any of the pending claims obvious under 35 U.S.C. §103(a).

First Ground of Rejection for Review on Appeal

With regard to the Section 101 rejections of claims 10-17, Appellants note that these claims were rejected by the Examiner under Section 101 as being directed towards non-statutory subject in the form of a computer program provided on one or more tangible computer readable medium. *See* Final Office Action mailed March 29, 2007, pages 2-3. In particular, the Examiner stated that “[i]t does not matter where the ‘computer program’ is provided on, it’s still the computer program [that] is being claimed, thus this renders [the claims] to be non-statutory.” *Id.* Although Appellants do not necessarily agree with the Examiner’s reasoning, in a previously filed Response to the Final Office Action, Appellants amended claims 10-17 to recite “one or more computer readable storage media having a computer program stored thereon,” in accordance with the Examiner’s suggested language for overcoming the Section 101 rejection. *See* Response to Final Office Action, pages 3-5. Nevertheless, the Examiner subsequently refused entry of these amendments, asserting that “computer readable storage media” was not supported by the specification. *See* Advisory Action, mailed June 18, 2007.

In the previously filed Appeal Brief, Appellants noted that the specification *clearly* states that embodiments of the present invention may “comprise or communicate with a *memory or data storage component for storing programs and routines.*” Application, page 6, lines 5-14. (Emphasis added). The specification further states that *any* type of memory or storage device, including magnetic and optical devices, constitutes suitable computer readable media for storing the disclosed programs and routines. *See id.* Moreover, Appellants submit that the disclosed memory, storage, and magnetic/optical devices would clearly be classified as computer readable storage media by anyone skilled in the art. Therefore, Appellants respectfully traverse the Examiner’s assertion that the amended claim language fails to be supported by the specification and assert that claims 10-17 would be allowable under Section 101 in view of the previously filed but un-entered amendments. Accordingly, Appellants respectfully request that the Board consider the rejection of claims 10-17 in this light.

Second Ground of Rejection for Review on Appeal

Further, with regard to the rejection of claim 36 under Section 101, Appellants, in the previously filed Appeal Brief, reminded the Examiner of the requisite legal guidelines governing the rejection of claims under 35 U.S.C. §101. In summary, the courts have held that if a claim, when read as a whole and in light of the specification, produces a “useful, concrete, and tangible” result, the claim meets the statutory requirements of Section 101. *See AT&T Corp. v. Excel Communications, Inc.*, 50 U.S.P.Q.2d 1447, 1451 (Fed. Cir. 1999) (quoting *In re Alapatt*, 31 U.S.P.Q.2d 1545 (Fed. Cir. 1994) (*en banc*)). Moreover, Appellants noted that these points have been acknowledged and further emphasized by the U.S. Patent and Trademark Office recently in the Memorandum titled “Clarification of Interim Guidelines for Examination of Patent Applications for Subject Matter Eligibility” dated April 12, 2007 and sent by John J. Love, Deputy Commissioner for Patent Examination Policy, to the Technology Center Directors. *See* Appeal Brief, Exhibit A.

With this in mind, Appellants note that independent claim 36 recites “[a] method for limiting remote access to a medical imaging system comprising differentiating functionality of a system user interface based on *proximity* of an operator workstation to a medical imaging device.” (Emphasis added). Contrary to the Examiner’s assertions, this subject matter is not a mathematical algorithm, a natural phenomena, a law or principle of nature or any other such concept which might be construed as abstract in nature. Rather, Appellants reiterate that the recited act of differentiating functionality of an interface based on proximity (e.g., local or remote locations) is useful for permitting the control of *some* functions of a medical imaging device at a distance, while disallowing the control of other functions from a distance, and thus *clearly* yields a useful, concrete and tangible result. For example, the recited method may allow a remote service technician to service, configure, or otherwise interact with a medical imaging device, while simultaneously *preventing* the remote service technician from viewing confidential patient data, manipulating components of the imaging device (e.g., gantries, mechanical arms, tables, etc.), or from activating radiation emitting components (e.g., X-rays, magnetic fields,

etc.), the latter of which may be harmful to the patient or local operator. *See* Application, page 7, lines 9-21.

In response to Appellants' arguments set forth in the Appeal Brief, the Examiner merely stated that he "believes that claim 36 is directed towards non-statutory matter," without providing any further analysis or explanation whatsoever. Examiner's Answer, page 11. Therefore, in view of the above discussed legal guidelines, as applied to claim 36 and coupled with the Examiner's own failure to provide any explanation or reasoning for maintaining the rejection of claim 36 under Section 101, Appellants can only assume that the Examiner's maintenance of the Section 101 rejection of claim 36 is based on a mistaken interpretation or application of the law. Therefore, Appellants respectfully submit to the Board that the Examiner's rejection of claim 36 under Section 101 is without any basis or support.

Third Ground of Rejection for Review on Appeal

Further, in response to the deficiencies highlighted by Appellants in the previously filed Appeal Brief regarding the Examiner's Section 103 rejection of independent claims 1, 7, 10, 16, 19, 28, and 37 under the Miller and Lounsberry references, the Examiner maintained the rejections, asserting that "[a]ll of the component parts are known in Miller and Lounsberry" and that "the only difference is the combination of the known prior art elements into a single system by adding the ability for remote use of the system for increased use efficiency." *Id.* Appellants respectfully disagree and submit that the Examiner has again overlooked several features recited by these claims which are *not* disclosed by either the Miller or Lounsberry references.

As previously pointed out by Appellants in the Appeal Brief, the Miller reference is concerned with allowing or restricting access to certain features in a user interface based on *user authorization*. Appellants submit that is well known in the art that workstations or computer systems may define different classes of users in which each user class may have unique permissions with regard to the access of various features of

the workstation. That is, certain users may have permissions to access certain features of a system that other users do not. In this context, a workstation or system may determine a user's permissions based on credentials supplied by the user, such as a username, login, password, or some combination thereof. *See* Miller, col. 2, lines 49-54. For example, by supplying an authorized password, a user may gain access to certain features of a user interface that were previously obfuscated or restricted. To provide one example, in the well known Microsoft Windows based operating systems, a user designated as an "administrator" may be permitted to access more features and/or data compared to a user designated as a "guest." However, if a guest user obtains credentials (e.g., login name or password) to an administrator account, the guest user may re-login using these credentials, thus obtaining access to additional features, data, or privileges previously unavailable when logged in under the guest account.

To the contrary, independent claims 1, 10, and 19, recite, *inter alia*, the designation of *limited remote access interface regions* of a system user interface and the modification of these *limited remote access interface regions* in screen data sent to a remote operator workstation. Independent claims 7, 16, and 28 similarly recite, *inter alia*, designating one or more interface regions of a system user interface as *limited remote access interface regions*. Further, claim 1 also recites displaying the modified interface regions at a remote operator workstation such that the system user interface has functionality on a local workstation which is not enabled on a remote workstation. Appellants submit that none of these features are disclosed by the combination of the Miller and Lounsberry references.

Unlike the teachings of the Miller reference, the functionalities of the recited user interface are *not* limited in any way by user authorization or credentials (e.g., it is not simply a matter of the remote user signing in with an authorized credentials). Rather, the functionalities of the user interface are determined *solely* based on whether a user is *remote* or *local* with respect to the workstation. In other words, it is the *physical proximity* of the user that determines what functions will be restricted or permitted.

Therefore, Appellants submit that because the Miller reference fails to take the physical proximity of a user into account when determining user interface restrictions, it cannot possibly disclose the designation of *limited remote access interface regions* and the modification of these *limited remote access interface regions* in screen data sent to a *remote operator workstation*, as recited by independent claims 1, 10, and 19, nor can it possibly disclose the designation of one or more interface regions of a system user interface as *limited remote access interface regions*, as recited by independent claims 7, 16, and 28. At best, the obfuscation of certain portions of a user interface, as described by the Miller reference, may be considered as designating limited *user access* regions depending on the particular permissions attributed to a particular user or account. However, the user's access appears to be *independent* of the user's proximity (e.g., local or remote). This is clearly not the equivalent of designating *limited remote access interface regions* in the context of the presently pending claims.

In response to the previously filed Appeal Brief, the Examiner has advanced the argument that the term "access," as recited by the claims, is not limited to proximity simply because the term "proximity" is not included in the claims. *See* Examiner's Answer, page 12. Thus, the Examiner asserted that "access" may be interpreted broadly as including access based on user authorization. *See id.* Appellants respectfully disagree. It is well established case law that the Examiner must interpret claims as one of ordinary skill in the art would reasonably interpret the claim in view of the specification. *See In re American Academy of Science Tech Center*, 70 U.S.P.Q.2d 1827 (Fed. Cir. 2004). With this in mind, Appellants reiterate that one of the objectives of the present technique is to prevent a *remote* user from activating radiation emitting components or moving components of a medical imaging device. *See* Application, page 7, lines 9-21. This is because a remote user may not be able to physically see the medical imaging device, and thus may improperly or inadvertently trigger radiation emissions and/or mechanical movement of the medical imaging device, both of which may be harmful to local persons (e.g., doctors and patients). *See id.* As such, Appellants submit that one of ordinary skill in the art would *clearly* understand that limiting *remote access*, as used in the claims, is to

be interpreted in the context of a remote user's *proximity*. Further, the claims at issue clearly recite distinctions in operation based upon whether a workstation or an interface are locally or remotely employed. Appellants respectfully submit that anyone conversant in the English language, and certainly one of ordinary skill in the art having the benefit of the present disclosure, would readily appreciate and understand that these terms denote and relate to *proximity*.

The Examiner also appears to hypothesize that even if his interpretation of "access" with regard to the Miller reference is incorrect, that the combination of the Lounsberry reference cures all the deficiencies of the Miller reference. See Examiner's Answer, page 12. Again, Appellants respectfully disagree. To the extent that the Examiner has proposed the combination of these references, the Examiner has relied on the Lounsberry reference solely for the teaching that a medical device may be serviced via remote access. However, Appellants submit that the mere teaching of remote access fails to obviate the deficiencies of the Miller reference. In particular, such a combination still fails to teach or suggest (1) the designation of *limited remote access interface regions*, (2) modifying a user interface based on the designated *limited remote access interface regions*, and (3) that the *modified remote interface* at a remote operator workstation has *different functionality* (e.g., restricted) relative to that of the local workstation. Instead, the Examiner's proposed combination of the Miller and Lounsberry reference appears to only suggest, if even, that a remote user would be able to access the *same* functionalities as a local user if the appropriate authorization credentials are supplied by the remote user. In this case, it is still the user authorization, *not* the proximity of the user that determines access privileges. As discussed above, this is in direct contrast with the teachings of the present disclosure and the presently pending claims which require that limiting access to and functionality of the user interface is based on *proximity*, not user authorization. Accordingly, Appellants submit that the mere teaching of remote access by the Lounsberry reference is insufficient to obviate the deficiencies of the Miller reference and, therefore, the Examiner has not established a *prima facie* case of obviousness in this regard.

Further, Appellants direct the Board's attention now to certain additional features recited by independent claims 7, 16, and 28. In particular, each of these claims further recites, *inter alia*, the *identification of restricted remote inputs* in an input stream to a local system where the restricted remote inputs are generated at a remote workstation, and the *removal of the restricted remote inputs from the input stream* to prevent remote activation of an imaging system. With regard to this recited feature, Appellants note that the specification of the present application clearly describes that remote inputs are identified and filtered such that only non-restricted remote inputs are communicated to an imaging system. *See* Application, page 11, lines 6-17. With reference now to Fig. 2, Appellants note that this figure clearly illustrates that the filtering 76 of remote user inputs 74 is performed by a limited communication module 50. *See id.* at Fig. 2. Subsequent to the filtering step 76, a set of filtered inputs 78 is produced and communicated to an imaging system 10. *See id.* Appellants submit that these additional features are also not present in the combination of the Miller and Lounsberry references, contrary to the Examiner's assertions.

As presented in the previously filed Appeal Brief, Appellants noted that the Miller reference did not teach or suggest the identification of restricted inputs in an input stream to a local system or the removal of the restricted inputs from the input stream, as recited in the present claims. In contrast, the technique described in the Miller reference prevents restricted inputs from even being generated. *See* Miller, col. 8, lines 41-45. In particular, this is accomplished by obscuring a control such that the security control subclass "does not permit a user to interact with, or otherwise manipulate, the obscured data." *See id.* (Emphasis added). Therefore, because the Miller reference explicitly teaches that a user cannot interact or manipulate obscured or restricted portions of an interface, the Miller reference cannot possibly be construed as teaching the filtering and removal of restricted inputs (since no restricted inputs may even be generated in the first place). Appellants note that this is in *direct contrast* with the recitations of independent claims 7, 16, and 28, in which a remote user *may* generate restricted inputs, but that such

restricted inputs are simply filtered before they can reach the imaging device. Moreover, Appellants note that in the “Response to Arguments” section of the Examiner’s Answer, the Examiner provided no response with regard to this deficiency. *See generally*, Examiner’s Answer, pages 10-14. Accordingly, Appellants submit to the Board that the Examiner has failed to establish a *prima facie* case of obviousness under the Miller and Lounsberry references with regard to this feature as well.

Appellants now direct the Board’s attention independent claim 37, which recites, *inter alia*, a limited communication module configured to provide different functionality to the one or more *local* operator workstations and the *remote* operator workstation. As clearly described in the claim, the different functionality is with respect to a *local* workstation, and a *remote* workstation. In other words, the limiting of functionality is based on *proximity* of the *remote* workstation relative to the *local* workstation. Indeed, as described above, the recited “limited communication module” is clearly defined by the specification as filtering received remote inputs to remove those remote inputs which have been restricted to the remote operator. Thus preventing the remote user from accessing certain features or data which may be available on the local workstation. *See* Application, page 11, lines 6-17; Fig. 2. In contrast, the Miller reference, as described above, is concerned *only* with providing different functionality based on user supplied authorization or credentials. *See* Miller, col. 2, lines 49-59; col. 3, lines 13-19, 32-44; col. 4, lines 7-16. Moreover, the technique described by the Miller reference is explicitly stated as capable of being implemented on a single computer that is not in communication with any other computer or computer system. *See id.* at col. 5, lines 66 – col. 6, lines 2. Thus, the Miller reference cannot possibly be concerned with user proximity as a factor for determining or differentiating functionality. Appellants note, however, that to the extent the Miller reference does appear to contemplate control access based on terminal authorization, such access is *still* generally based upon user supplied credentials supplied to a terminal indicating what user (or alleged user) is believed to be operating the terminal, *not* where the terminal is located. *See id.* at col. 9, line 60 – col. 10, line 11.

As discussed above, with regard to independent claim 37, the Examiner has again advanced the argument that limiting access or functionality is not limited to *proximity* absent an explicit recitation in the claim. Appellants submit, however, that one of ordinary skill in the art, when interpreting the claim recitation in view of the specification, would *clearly* understand that limiting the remote operator workstation to provide different functionality is *clearly* based on the *proximity* of the remote operator workstation. As discussed above, one objective of the present disclosure is to *limit* the actions which may be controlled by a remote user. For example, because a remote user may not be able to physically see the medical device, and thus may inadvertently trigger radiation emissions and/or mechanical movement of the medical device, both of which may be harmful to local persons (e.g., doctors and patients), it is desirable to limit or restrict the remote user from accessing these functions. *See* Application, page 7, lines 9-21. Accordingly, Appellants submit that for at least the reasons discussed above with regard to independent claims 1, 7, 10, 16, 19, and 28, the Examiner has failed to establish a *prima facie* case of obviousness with regard to independent claim 37 under the combination of the Miller and Lounsberry references.

Fourth Ground of Rejection for Review on Appeal

With regard to independent claim 36, which the Examiner has rejected in view of the combination of the Goertzel and Lounsberry references, Appellants note that this claim recites *differentiating functionality* of a system based (e.g., remote workstation) on proximity to another system (e.g., local medical imaging device). In the previously filed Appeal Brief, Appellants noted that although the Goertzel reference does appear to mention the use of “location” in controlling access to network users, the use of the term “location” is meant to refer to a virtual location as opposed to a spatial or physical location defined by the physical proximity between a remote and local user or workstation. *See* Goertzel, Abstract. Indeed, the Goertzel reference states that:

As can be readily appreciated, as used herein, the term "location" is a logical concept related to the type of location connection rather than a physical concept related to the distance from which the connection is originating. For example, a user can connect to the network 60 via the RAS 68₂ from virtually any physical location that has any type of telephone service. Similarly, a user may connect from an "Intranet" location that may be relatively far (physically) from the local machine 60. Indeed, a RAS 68₁, 68₂ dial-up user may be closer in physical distance than user at a remote office 64₁ connecting via a T1 line, even though the dial-up user will ordinarily be considered less secure. As such, as used herein, each location from which a user may connect is considered a virtual location rather than a physical place.

Goertzel, col. 5, lines 12-25. (Emphasis added). Hence, although the Goertzel reference appears to contemplate the use of location in restricting network access, the plain teachings of the reference explicitly disclose that it is not the location based on physical proximity which is used in implementing such restrictions, but rather the trustworthiness or security characteristics of the access site (e.g., "virtual location").

To the contrary, as noted above, independent claim 36 differentiates functionality of a system based on proximity between two systems (e.g., remote workstation and local medical imaging device), not an arbitrary location, virtual or otherwise. In response to Appellants arguments in the previously filed Appeal Brief, the Examiner stated that absent an *explicit* recitation of "physical proximity," the term "proximity" may be construed as either a physical or a virtual proximity. *See* Examiner's Answer, page 13. Appellants respectfully disagree with this interpretation and submit that the Examiner has not given the claimed terms the broadest *reasonable* interpretation that one of ordinary skill in the art would reach when interpreting "proximity" in view of the specification, in accordance with well established case law. *See In re American Academy of Science Tech Center*, 70 U.S.P.Q.2d 1827 (Fed. Cir. 2004).

With this in mind, Appellants note that embodiments of the present technique are directed towards limiting functionality on a *remote* workstation which is *physically* located away from the local workstation and/or medical imaging device. *See* Application, page 2, line 14 – page 3, line 7; page 7, lines 9-21. In particular, one of the objectives of the present technique is to prevent a *remote* user from activating radiation emitting components or moving components of a medical imaging device due to the fact that because a remote user may not be able to physically see the medical device, such activations or manipulations, whether accidental or intentional, may trigger radiation emissions and/or mechanical movement of the medical device which may be harmful to local persons (e.g., doctors and patients). *See id.* Thus, Appellants submit that the specification *clearly* describes proximity with respect to *physical location*.

Further, as emphasized by the Federal Circuit, the specification “is always highly relevant to the claim construction analysis. Usually, it is dispositive; *it is the single best guide to the meaning of a disputed term.*” *See Phillips v. AWH Corp.*, 75 U.S.P.Q.2d 1321 at 1327 (Fed. Cir. 2005) (*en banc*) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)) (Emphasis added). As such, Appellants submit that one of ordinary skill in the art would *clearly* understand and interpret that differentiating functions *based on proximity*, as recited by independent claim 36, is meant to refer to the *physical proximity* between two systems (e.g., remote operator workstation and medical imaging device). Moreover, Appellants note that the most *general* meaning of the term “proximate,” is defined in the *Merriam Webster Collegiate Dictionary* as “very near.” *See* Definition 2a of “proximate,” *The Merriam Webster Collegiate Dictionary*, 11th ed. (2003). Thus, even the plain meaning of the term proximate indicates that *proximity* is related to the *physical location* of something. Again, this is in direct contrast to the Goertzel reference, which explicitly states that “location” is meant to refer to a virtual and not a physical location. Indeed, the plain meaning of the term “proximity” is not believed to encompass “virtual locations” or other logical constraints that appear to be found and used in the Goertzel reference *solely* for the purpose of explaining their invention. Accordingly, Appellants submit that because the Examiner’s interpretation of

“proximity” is in direct contrast with both the plain meaning of the term and the interpretation one of ordinary skill in the art would reach when construing the claims in view of the specification, the Examiner’s suggested correlation of “proximity” as referring to a virtual location *cannot* possibly be considered a reasonable interpretation.

Finally, to the extent that the Examiner further argues that the Goertzel reference *does* discuss physical proximity with regard to the physical locations of local machines, this argument also fails because as clearly disclosed by the Goertzel reference, it is *virtual location* based on trustworthiness or security of an access site that is used to control network access, not the *physical location*. Thus, to the extent that physical locations may be discussed, they are *clearly not* used for determining or controlling user access. As such, Appellants submit that the Examiner has not established that the Goertzel reference teaches differentiating functionality of a first system (e.g., remote operator workstation) based on its proximity to a second system (e.g., medical imaging device), as recited by independent claim 36. Moreover, the Lounsberry reference fails to obviate these deficiencies and, therefore, the Examiner has also failed to establish a *prima facie* case of obviousness with regard to independent claim 36.

Conclusion

In summary, Appellants reiterate that the after-final amendments previously presented with regard to claims 10-17, which are in accordance with the Examiner’s suggested language, are *clearly* supported by the specification, contrary to the Examiner’s assertions. Thus, Appellants believe that claims 10-17 are clearly allowable under Section 101. Appellants further reiterate that the method recited by independent claim 36 does indeed produce a useful, concrete, and tangible result, as discussed above, and is therefore

also allowable under Section 101. Further, because the Examiner has failed to show that any combination of the Miller, Goertzel, or Lounsberry references discloses *all* of the elements recited by presently pending independent claims, Appellants respectfully submit to the Board that the Examiner has failed to establish a *prima facie* case of obviousness with regard to independent claims 1, 7, 10, 16, 19, 28, 36, and 37, or any claims depending therefrom.

Respectfully submitted,

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